

REMARKS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1-13 are presently active in this case. The present Amendment amends Claims 1, 4 and 8 without introducing any new matter.

The outstanding Office Action rejected Claims 1-3, 8, 9, 12 and 13 under 35 U.S.C. §102(b) as anticipated by Karlsson (U.S. Patent No. 5,499,386). Claims 4-5 were rejected under 35 U.S.C. §103(a) as unpatentable over Karlsson in view of Palenius et al. (U.S. Patent Publication No. 2002/0019231, herein "Palenius"). Claims 6-7 were rejected under 35 U.S.C. §103(a) as unpatentable over Karlsson in view of Palenius and further in view of Ramakrishna et al. (U.S. Patent No. 6,233,455, herein "Ramakrishna"). Claims 10-11 were rejected under 35 U.S.C. §103(a) as unpatentable over Karlsson in view of Ramakrishna.

To clarify Applicants' invention, independent Claims 1, 4 and 8 are amended to recite that the first base station is "capable of direction beam" in the body of the claims, and to recite "and different handover threshold values for disconnecting the mobile station with the first base station and the second station." This feature finds non-limiting support in the disclosure as originally filed, for example at page 13, lines 12-18. Therefore, the changes to the claims are not believed to raise a question of new matter.¹

In response to the rejection of Claims 1-3, 8-9 and 12-13 under 35 U.S.C. §102(b), Applicants respectfully request reconsideration of this rejection and traverse the rejection, as discussed next.

Briefly recapitulating, Applicants' invention, as recited in Claim 1, relates to a method of connecting a mobile station with a base station via a radio link in a mobile communication system, the system including a first base station capable of directional beam

¹ See MPEP 2163.06 stating that "information contained in any one of the specification, claims or drawings of the application as filed may be added to any other part of the application without introducing new matter."

signal transmission and reception and a second base station incapable of directional beam signal transmission and reception. The method includes the step of: setting different handover threshold values for connecting the mobile station with the first base station and the second station, and *different handover threshold values for disconnecting the mobile station with the first base station and the second station*, so as to preferentially connect the mobile station to the first base station rather than to the second base station. Independent Claims 4 and 8 disclose similar features in the context of a radio network controller (Claim 4) and a mobile station (Claim 8).

As explained in Applicants' Specification at page 12, lines 29-33 with corresponding Figure 1, Applicants' invention improves upon conventional methods of connecting mobile stations with a base station, since it can improve the quality of the received signals at the base station and the mobile station.

Turning now to the applied reference, Karlsson discloses a multi-level cellular radio architecture serving mobile subscriber stations moving within the system.² Karlsson's system decides on the best serving cell in function of preference and signal strength of the respective cell. However, Karlsson fails to teach or suggest

a base station connection control unit configured to set *different handover threshold values for connecting* the mobile station with the first base station and the second base station *and different handover threshold values for disconnecting* the mobile station with the first base station and the second station,

as recited in independent Claim 1. In other words, the claimed setting different handover threshold values for connecting *and* disconnecting the mobile station with the first base station and the second station, so as to preferentially connect the mobile station to *the first base station rather than to the second base station*. Karlsson recites that "the signal strength of the radio signals providing communication between the mobile station and the base station

² See Karlsson in the Abstract.

... is measured and compared to a preselected threshold value.”³ Accordingly, Karlsson uses a single, preselected threshold value, not depending on different types of base stations. Further, Karlsson teaches that data is assigned to each cell, one of the parameters is the signal strength threshold. Accordingly, a preselected threshold value assigned to each cell, as taught by Karlsson, *is not* different handover threshold values for connecting the mobile station with the first base station and the second station, *and* different handover threshold values for disconnecting the mobile station with the first base station and the second station, as recited in Claim 1.

The outstanding Office Action explains at page 3, lines 1-5, that if Karlsson is broadly interpreted, Karlsson does teach such a feature. Applicants respectfully disagree. Karlsson clearly explains that *communication* between the mobile station and the base station is compared with a threshold value to determine signal strength,⁴ and that the *handoff between cells* is determined on the same threshold value.⁵ Karlsson clearly does not use any different thresholds for connecting and disconnecting. Karlsson recites “a signal strength threshold which is the threshold for sufficient signal strength when served by the cell,”⁶ and thereby again confirms that there is only one threshold per cell, related to the signal strength.

In addition, Claim 1 is amended to recite that the first base station is capable of directional beam, this feature previously recited in the preamble of Claim 1. Karlsson does not teach or suggest that one of the base stations B1-B10 is capable of a directional beam. To the contrary Karlsson explains that the base stations are equipped with omni-directional antennas.⁷

Therefore, the applied reference fails to teach or suggest every feature recited in Applicants’ claims, so that Claims 1-3, 8-9 and 12-13 are patentably distinct over the applied

³ See Karlsson at column 3, lines 13-17.

⁴ See Karlsson at column 3, lines 13-17.

⁵ See Karlsson at column 3, lines 17-20 and at column 8, lines 47-52.

⁶ See Karlsson at column 11, lines 15-20.

⁷ See Karlsson at column 4, lines 60-61.

reference. Accordingly, Applicants respectfully traverse, and request reconsideration of, the rejection based on Karlsson.⁸

Regarding the rejection of Claims 4-5 under 35 U.S.C. §103(a), the applied reference Palenius does not remedy the deficiencies of Karlsson. Palenius discloses a method for the handover of a terminal in a cellular communication system, wherein a classification is performed whether the handover is urgent.⁹ However, Palenius is silent on the claimed different handover threshold values. Palenius merely teaches that a set of measurements are used for the handover to each cell, and that these measurements include the quality of each cell.¹⁰ Therefore, even if the combination of Karlsson and Palenius is assumed to be proper, the combination fails to teach every element of the claimed invention. Specifically, the combination fails to teach the claimed different handover threshold values for connecting and disconnecting the mobile station with the first base station and the second station, respectively, so as to preferentially connect the mobile station to the first base station rather than to the second base station. Accordingly, Applicants respectfully traverse, and request reconsideration of, this rejection based on these patents.¹¹

Regarding the rejection of Claims 6-7 and the rejection of Claims 10-11 under 35 U.S.C. §103(a), Applicants respectfully request reconsideration of these rejections, since Claims 10-11 are dependent upon Claim 8, and Claims 6-7 are dependent upon Claim 4 and Claims 4 and 8 are believed to be patentable over the references of record. Further, even if the combination of Karlsson with Ramakrishna is assumed to be proper, the applied reference Ramakrishna does not remedy the deficiencies of Karlsson, since Ramakrishna is concerned

⁸ See MPEP 2131: "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference," (Citations omitted) (emphasis added). See also MPEP 2143.03: "All words in a claim must be considered in judging the patentability of that claim against the prior art."

⁹ See Palenius in the Abstract.

¹⁰ See Palenius at page 4, paragraph 31, lines 3-9.

¹¹ See MPEP 2142 stating, as one of the three "basic criteria [that] must be met" in order to establish a *prima facie* case of obviousness, that "the prior art reference (or references when combined) must teach or suggest all the claim limitations," (emphasis added). See also MPEP 2143.03: "All words in a claim must be considered in judging the patentability of that claim against the prior art."

with soft handoff of mobile terminals in a CDMA system,¹² and is silent on the use of different handover threshold values.

The present amendment is submitted in accordance with the provisions of 37 C.F.R. §1.116, which after Final Rejection permits entry of amendments placing the claims in better form for consideration on appeal. As the present amendment is believed to overcome outstanding rejections under 35 U.S.C. §102(b) and 35 U.S.C. §103(a), the present amendment places the application in better form for consideration on appeal. In addition, the present amendment is not believed to raise new issues because the changes to Claims 1, 4 and 8 merely clarify a feature regarding the threshold values. It is therefore respectfully requested that 37 C.F.R. §1.116 be liberally construed, and that the present amendment be entered.


Consequently, in view of the present Amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 1-13 is earnestly solicited.

¹² See Ramakrishna at column 3, lines 57-60.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicants' undersigned representative at the below listed telephone number.

Respectfully submitted,

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